

In the Claims:

Cancel claims 33 through 50 without prejudice. Amend claims 1, 3, 5 through 8, 10 through 17, 25 through 32, 51 through 59 and add new claims 68 through 71.

- Q²
1. (Amended) A sleeve for the receiver section for an acoustic logging tool including a tool body with receiver stations; the sleeve being capable of surrounding the tool body at least in the region of the receiver stations and having first and second apertured portions spaced along its length, the first apertured portion having elongate axial bar elements separated by windows in a circumferential arrangement, the windows being wider than the bars, and the second apertured portion having rows of circumferentially elongate slots; characterised in that each slot has a center portion and end portions, the center portion being narrower than the end portions, and the end portions being enlarged compared to the center portion, wherein the dimensions in the first apertured portion are chosen to provide a low spring constant to the sleeve.

- Q³
3. (Amended) A sleeve as claimed in claim 2, wherein the ratio of the width of the slot in the center portion to the radius of the end portion is at least 1:4.

- Q⁴
5. (Amended) A sleeve as claimed in claim 1, 2 or 3 wherein a second apertured portion is provided at each end of the sleeve.

6. (Amended) A sleeve as claimed in any of claims 1 to 5, wherein each first apertured portion has no more than eight windows.

7. (Amended) A sleeve as claimed in any of claims 1 to 6, wherein a first apertured portion surrounds the receiver stations.

8. (Amended) A sleeve as claimed in claim 7, wherein the windows of a first apertured portion are located in front of the receiver stations.
-

- Q⁵ 10. (Amended) An acoustic logging tool comprising a tool body with a transmitter section and a receiver section comprising a number of receiver stations spaced along a tool body, each station comprising at least one receiver and a sleeve surrounding the tool body at least in the region of the receiver stations and having first and second apertured portions spaced along its length, the first apertured portion having elongate axial bar elements separated by windows in a circumferential arrangement, the windows being wider than the bars, and the second apertured portion having rows of circumferentially elongate slots, characterised in that the sleeve comprises a sleeve as claimed in any of claims 1 to 9.
11. (Amended) A tool as claimed in claim 10, wherein the slots in each row of the second apertured portion are offset from adjacent rows.
12. (Amended) A tool as claimed in claim 10 or 11, wherein each station is surrounded by a first apertured portion of the sleeve.
13. (Amended) A tool as claimed in claim 10, 11 or 12, comprising a central mandrel around which are mounted alternate receiver mounts and spacers, the spacers being firmly connected to the mandrel and the receiver mounts being held in position by the spacers.
14. (Amended) A tool as claimed in claim 13 wherein the spacers and receiver mounts are made of steel.
15. (Amended) A tool as claimed in claim 13 or 14, wherein each receiver mount contacts its neighboring spacers via resilient contact pads.

16. (Amended) A tool as claimed in any of claims 13, 14 or 15, wherein, when arranged vertically, the weight of each receiver mount is carried by the spacer located below that mount.

17. (Amended) A receiver section for an acoustic logging tool comprising a number of receiver stations spaced along a tool body, each station including a number of polarized pressure sensors wherein the axis of polarization of the sensors is parallel to the axis of the tool body.

25. (Amended) A receiver section as claimed in any of claims 17 to 24, further comprising a sleeve being capable of surrounding the tool body at least in the region of the receiver stations and having first apertured portion and second apertured portion spaced along its length, wherein

- (a) the first apertured portion has elongate axial bar elements separated by windows in a circumferential arrangement, the windows being wider than the bars, and
- (b) the second apertured portion has rows of circumferentially elongate slots, each slot having a center portion and end portions, the center portion being narrower than the end portions, and the end portions being enlarged compared to the center portion.

26. (Amended) A receiver section as claimed in claim 25, wherein the slots of the second apertured portion have parallel sides in the center portion and approximately circular end portions.

27. (Amended) A receiver section as claimed in claim 26, wherein the dimensions of the windows in the first apertured portion are chosen to give a low spring constant to the sleeve.

28. (Amended) A receiver section as claimed in claim 27, wherein first apertured portions and second aperture portions alternate along the length of the sleeve.

29. (Amended) A receiver section as claimed in claim 25, 26 or 27 wherein each second apertured portion is provided at each end of the sleeve.
30. (Amended) A receiver section as claimed in any of claims 25 to 29, wherein each first apertured portion has no more than eight windows.
31. (Amended) A receiver section as claimed in any of claims 25 to 30, wherein a first apertured portion surrounds the receiver stations.
32. (Amended) A receiver section as claimed in claim 31, wherein the windows of a first apertured portion are located in front of receiver stations.
-

- Q1 51. (Amended) An acoustic logging tool comprising a tool body with a transmitter section and a receiver section, said receiver section comprising a number of receiver stations spaced along a tool body, each station including a number of polarized pressure sensors comprising piezoelectric stacks, characterized in that the axis of polarization of the sensors is parallel to the axis of the tool body.
52. (Amended) An acoustic logging tool comprising a tool body with a transmitter section comprising a dipole transmitter and a receiver section comprising a number of receiver stations spaced along a tool body, each station including a number of polarized pressure sensors spaced around the circumference of the tool body, characterized in that the axis of polarization of the sensors is parallel to the axis of the tool body.
53. (Amended) The acoustic logging tool of claim 52, wherein the pressure sensors comprise ceramic piezoelectric stacks.
54. (Amended) The acoustic logging tool of claim 52, wherein each said station comprises four pressure sensors spaced equidistantly around the tool body.

55. (Amended) The acoustic logging tool of claim 52, wherein the receiver section further comprises a central mandrel around which are mounted alternate, pressure sensor mounts and spacers, the spacers being firmly connected to the mandrel and the sensor mounts being held in position by the spacers.
56. (Amended) The acoustic logging tool of claim 55 wherein said spacers and said pressure sensor mounts are made of steel.
57. (Amended) The acoustic logging tool of claim 55 wherein each pressure sensor mount contacts its neighboring spacers via resilient contact pads.
58. (Amended) The acoustic logging tool of claim 55, wherein, the central mandrel comprises a rod having a sheath.
59. (Amended) The acoustic logging tool of claim 52, wherein said receiver section forms a part of an acoustic logging tool comprising a sonde body and a transmitter section.
-
- Q8 68. (New) A receiver section for an acoustic logging tool comprising a number of receiver stations spaced along a tool body, each station including a number of polarized pressure sensors spaced around the circumference of the tool body, characterized in that the axis of polarization of the sensors is parallel to the axis of the tool body, said pressure sensors in pressure sensor mounts disposed about a central mandrel, wherein said pressure mounts are moveable along the mandrel.
69. (New) The receiver section of claim 68, further comprising spacers between the pressure sensor mounts, wherein spacers are firmly connected to said central mandrel.